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ABSTRACT

There are three main reasons why reading research has not had a stronger influence on what goes on in schools. The first reason is the powerful impact of social forces such as the bandwagon effect, the pendulum swing, and the prevailing climate of opinion. These factors determine to an unfortunately large degree whether or not particular research results will be accepted as guides to practice. The second reason the impact of reading research on practice is limited is that the lines of communication between researcher and practitioner are not open. The third reason the potential effect of research on practice is diminished is that much of the published research on reading is of quite limited value. This paper recommends that several research studies be done on current controversial issues, including perceptual and perceptual-motor training, teaching reading skills, and training deficient abilities. It is suggested that a major service to the improvement of reading instruction would be to make all authoritative summaries of research accessible through widely published annotated bibliographies and Federal programs such as ERIC. (TS)

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PRACTICAL APPLICATION OF READING RESEARCH
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Research in reading has been going on for nearly a century, and more research is done on reading than any other curricular area; more than on all other curricular areas together. The most recent annual summary of reading research in Reading Research Quarterly covered 369 items, a tremendous number of reports. Yet reading research often fails to have the impact on practice that it might and should. New ideas in reading sometimes make great headway with no supporting research or with a very shaky and unconvincing research base.

This paper will first consider reasons why reading research has not had a greater influence on practice. It will then describe steps that ought to be taken and steps that are being taken to increase the practical impact of research on reading practices.

There are three main reasons why reading research has not had a stronger influence on what goes on in schools. The first of these is the powerful impact of social forces such as the bandwagon effect, the pendulum swing, and the prevailing climate of opinion.

The bandwagon effect is well known in politics. In a time of widespread dissatisfaction a new slogan can quickly attract a small following, even if untried and untested. If these supporters are enthusiastic and make sufficient noise they can create the impression that a great and glorious change is getting started. Attention from the mass media can accelerate the process. A rush can develop to be among the first to join, and as others observe the rapid growth of the movement that also may feel impelled to jump on the bandwagon.

Education has had its share of bandwagon effects. Within the past two decades there have been the rush to revise science teaching after Sputnik, the non-graded school, team teaching, the free school, and the open school, to name just a few. Most of these had not shown clear superiority over what had preceded them before they were recommended for widespread adoption. Tryout under favorable conditions had demonstrated that they could work. But how they would work in more typical schools, with varying teachers and various groups of pupils, had usually not been determined. Salesmanship preceded research.

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Given a bandwagon movement, it is almost inevitable that a pendulum swing will develop. The new idea becomes more and more popular, then doubts about it arise, and a trend away from it begins.

Many of the new movements which are current in education have persuasive rationales, but have little in the way of research support. In a just-released volume on new ways of dealing with individual differences, Michael Scriven (a philosopher) asserts that such movements as packaged individualized learning systems, competency-based teacher training, behavioral objectives, criterion-referenced testing, resource centers, and responsive environments have been promoted primarily on the basis of novelty, the positive implications of the movement's name, pressure from sponsoring groups and individuals, government funds for experimental implementation, and endorsement by people with prestigeous names, rather than on the basis of solid evaluative studies. He calls for an attitude of cool and skeptical caution regarding innovations until there is satisfactory evidence on what they can and cannot accomplish. He particularly deplores the pendulum swing. "It is the metronome of mediocrity, the crude clock that marks our lost chances of progress, and, I think, of survival. Once we have wound up this great engine, with all the forces of fashion and faddism, it is no easy task to slow it down, to get its cadence into step with the instruments that measure quality. The clock ticks on, and movements come and go to its beat." (13, p.200)

One effect of the pendulum swing is that often practice shifts from one undesirable overemphasis to an even more undesirable opposite. A change which may have originally been based on some valid research may be carried to an extreme far beyond what the research justified. Thus the idea that words can be recognized as wholes, which had a valid base in the early eye-movement and tachistoscope studies, was carried in some school systems to the extreme of forbidding teachers to teach phonics. Some of my students in the 1940's, when I would encourage them to include some phonics instruction in their reading activities, were afraid that if they did so, they would get in trouble with their school principals. Those who taught some phonics felt like educational bootleggers. During the 1960's the systematic teaching of decoding skills became fashionable again.

Another pendulum swing has taken place with regard to IQ tests. After World War I, group IQ tests came into very wide use in American schools. It was widely believed that the IQ was constant, mainly determined by heredity, and an excellent predictor of how much and how fast a child could learn. Greadually research revealed that the IQ was less constant, more modifiable by environment, and less accurate in predicting learning than had been supposed. But it took the social concerns about the disadvantaged which came to the fore in the 1960's to carry the pendulum swing to an undesirable extreme. In at least one great city (New York) the use of group IQ tests was forbidden in the schools even for purely research purposes such as the equation of experimental groups, and even when the results would not be communicated to school personnel nor entered on school records. This pendulum is still swinging, and it is risky to predict where it will be ten years from now.

A third aspect of the social forces that influence education is the powerful effect of the prevailing climate of opinion, the spirit of the times or Zeitgeist. Edwin G. Boring, the historian of psychology, has pointed out that some psychological discoveries had no effect or influence for a generation or two, and then were recognized as having been major contributions. When research results run counter to the prevailing orthodoxy they may dismissed as invalid, or just ignored. When the pendulum swings and the climate of opinion shifts, the previously neglected results may be resurrected or rediscovered. Jeanne Chall (5) has emphasized the importance of the climate of opinion on the reception of research on beginning reading.

These factors, the bandwagon effect, the pendulum swing, and the prevailing climate of opinion, determine to an unfortunately large degree whether or not particular research results will be accepted as guides to practice.

The second main factor limiting the impact of reading research on practice is that the lines of communication between researcher and practitioner are often down. Reading research is published in dozens of journals, few of which are read by reading practitioners. Because of space limitations and editorial preferences, published reports tend to be written in a compressed style that is difficult to read, and often employ technical jargon and statistical procedures that are unfamiliar to the practitioner. Even if a preactitioner has had the technical training to be able to understand and appraise research reports, he or she usually does not have either the time or the library resources to keep abreast of research trends in this way.

A third factor which diminishes the potential effect of research on practice is that much of the published research on reading is of quite limited value. As Campbell and Stanley have pointed out (3), many researches on the results of teaching have been quasi-experimental rather than truly experimental in design. Limitations of funding and resources have often resulted in small-scale studies, with unrepresentative populations, carried on for too short a time, with inadequate measures of results, and with less than ideal statistical treatment. Such studies are useful in training research workers but are not of much use in deciding important questions about practice. If so many published studies are inadequate, one can hardly blame the practitioner for looking elsewhere for guidance.

Up to here, this paper has discussed a number of reasons why research has not had more of an influence on reading practices. From here on, emphasis will be placed on what can be done to make the results of research more useful.

Research on Some Current Controversial Issues

It has long been known that some learners do better with one method of instruction and others do better with a different method. This fact, often referred to as "aptitude-treatment interaction," focusses attention on finding which method is right for which child, rather than which is

best for everyone. Wepman (13) and many others have recommended that one should determine the child's best aptitude and teach by the method which stresses that aptitude. In both beginning reading and remedial instruction, this implies that pupils with stronger visual than auditory aptitudes should be taught by a primarily visual method, while those with stronger auditory aptitudes should be taught by a method stressing phonics. That seems very reasonable.

In beginning reading, the best study yet available, by Helen M. Robinson (10), found no relation between a child's stronger aptitude (visual or auditory) and success in learning to read by a particular method. Most children were high in both aptitudes or low in both, or average in both. The minority who had discrepant aptitudes did not do better when the method matched their higher aptitude. Similar results were found by Barbara Bateman (1). Perhaps with improved aptitude tests the results will be different. Meanwhile, research does not support this particular application of the aptitude-treatment interaction idea. Research seems to support the use of a multi-sensory method from which the child can select whatever cues are most helpful to him in learning to identify written or printed words. In regard to remedial teaching there is insufficient research on this issue to decide the question.

Perceptual and Perceptual-Motor Training. A related issue is the use of tests of special abilities at the preschool or first grade level and giving special instruction to strengthen those abilities in which the child does poorly. A case in point is the use of the Frostig Developmental Tests of Visual Perception and the Frostig-Horne teaching materials which give practice in the five perceptual areas covered by the test. This had a tremendous bandwagon effect in the 1960's and is still quite widely used.

There has been a wealth of research on the Frostig program, and careful and authoritative reviews of this research have been prepared by Robinson (9) and by Wiederholt and Hammill (14). These reviewers agree on the following conclusions: 1) the Frostig-Horne program produces improved scores on the Frostig tests; 2) it sometimes but not always produces improved reading readiness scores; 3) it usually fails to do better than, and sometimes does not do as well as, conventional readiness and beginning reading instruction in its effect on reading.

The Kephard approach was also widely adopted in the 1960's, particularly in classes for exceptional children. Kephart (7) advocated a variety of activities to promote sensory-motor development and perceptual and motor integration. Klesius (8) analyzed more than 30 studies on the Kephart approach. Of the 11 studies which met his standards for acceptable research, six did not favor the Kephart procedures.

Another careful review covering 76 studies on the Frostig and Kephart procedures was issued by Hammill, Goodman and Wiederholt (6) in 1974. They concluded as follows: "The readiness skills of children were improved in only a few instances. The effect of training on intelligence and academic achievement was not clearly demonstrated. Particularly disappointing were the findings which pertained to the effects of such training on perceptual-motor performance itself... We have little doubt that any interested person who reads the efficacy literature will conclude that the value of perceptual training, especially those programs often used in schools, has not been clearly established. If he concludes that such training lacks solid support, he may begin to question the purchase of attractively

packaged materials which some companies offer teachers along with unsubstantiated claims concerning their merits, the practice of providing perceptual-motor training to all school children in the name of readiness training, and the assumption that a lack of perceptual-motor adequacy causes a considerable amount of academic failure."

If the Robinson, Klesius, and Hammill reviews were widely known, their effect on kindergarten and primary practices would be substantial. What they have shown is that perceptual and perceptual-motor practice that does not utilize verbal symbols is of doubtful value for reading.

Teaching Reading Skills or Training Deficient Abilities. In the area of remedial reading one issue became a bone of contention during the 1960's. Many of the leaders of the learning disabilities movement taught that learning failures are due to the retarded or defective development of specific mental abilities. Train those abilities and the child will be able to learn. The Illinois Test of Psycholinguistic Abilities (ITPA) has 12 subtests and is the instrument most often used to identify specific abilities related to reading. However, a review of more than 200 references on the ITPA by John B. Carroll in the Seventh Mental Measurements Yearbook indicates that: there are only three main factors in the ITPA, namely expressive vocabulary, receptive vocabulary, and rote memory; the test is biased in favor of middle class children; it has a quite high correlation with IQ; and there is no pattern of high or low scores that is characteristic of children with reading disabilities. It would seem that a program of training specific abilities based on the ITPA rests on fairly shaky ground. Furthermore, there is very little evidence as to the degree to which deficient abilities in children can be improved by special training.

The practical implications for the reading specialist and the classroom teacher trying to give individual help to a poor reader are that the limited time available can be spent more profitably in direct teaching of needed reading skills than in attempting to build up supposedly deficient abilities. The value of special abilities training in a self-contained class for learning disabilities is uncertain.

Making Authoritative Summaries of Research Accessible

It is a major service to the improvement of reading instruction when an expert on research makes an intensive, critical and evaluative study of the work done on a significant problem and writes a critique which analyzes the results of the various studies, integrates them, and arrives at conclusions and recommendations. Several such reviews have been cited above. But all too often they do not reach the eyes of the practitioner.

Over a period of many years The Reading Teacher had a special feature in which recent research on a specific topic was succinctly reviewed in each issue. Agatha Townsend started this in the 1950's; Samuel Weintraub carried it on during the 1960's; and J. Wesley Schneyer supervised it in 1970 and 1971. The last such feature was in the May 1971 issue.

This feature brought the results of recent research to the attention of the majority of IRA members and nothing as satisfactory for that purpose has yet taken its place. Restoring this feature, perhaps in an improved form, would seem highly desirable. The annotated bibliographies which IRA publishes from time to time are also helpful, but probably do not reach enough people. The reviews of research in specific fields prepared by special committees of the National Conference on Research in English are also valuable but do not reach a wide enough audience. The same is true of the volumes on reading published every few years by the National Society for the Study of Education.

Much more ought to be done, and can be done, to bring distillations of the results of research in readable form to the attention of the reading practitioner.

Federal support has been given to some efforts to select reading programs that are worthy to be emulated and to make information about them available. A few years ago, the American Institutes for Research was funded to identify exemplary remedial reading programs and to make descriptions of these programs available. These descriptions were entered into the ERIC system in 1971 with the identification numbers ED 053 881 to ED 053 890. A recent form letter from the Right to Read Program of the U.S. Office of Education states that 25 "Validated, Effective Reading Programs" have been selected and that descriptions of these programs will be available in a "Promising Practices Catalog." This catalog was to be available in February, 1975, but as of this writing has not yet appeared. Those wanting detailed information about one of the programs will be able to order an information package containing a filmstrip, a tape cassette, and two manuals. The criteria used in selecting these programs have not yet been announced and should be crucial in helping one to decide whether or not the selected programs are really exemplary.

According to Dr. John T. Guthrie, Director of Research for I.R.A., I.R.A. is taking part in a major effort to determine what makes a compensatory program in reading superior or inferior. The Educational Testing Service has a grant of $2,500,000 to collect data on 700 schools, selected to be representative of schools with compensatory education programs. Two hundred of these schools have supplied test data as well as questionnaire data. Thirty of the 200 schools were selected as representing the full range of achievement, from highest to lowest. Those 30 schools are being intensively studied, using interviews and classroom observations as well as the test and questionnaire data. The results should show which kinds of compensatory programs produce superior or inferior results, and the conditions necessary for superior results.

The Educational Testing Service's report will go to the U.S. Office of Education and may not be made public. However, the data are also being released to I.R.A. for use by a special committee chaired by Dr. William Kiler. Dr. Hughes will provide statistical analyses as requested by the committee. The committee will make its own analysis and interpretation of the results and will formulate a report which will be published

by I.R.A. This large-scale, carefully planned, and well funded project should be worth more than a score of small-scale studies in helping to identify practices that really work well in school settings. We need more such studies.

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